



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/993,009	11/19/2001	Sergei F. Kolomeitsev	VMA-506-A	5694

7590

07/25/2002

Andrew R. Basile
Young & Basile, P.C.
3001 West Big Beaver Road, Suite 624
Troy, MI 48084

EXAMINER

ELKASSABGI, HEBA

ART UNIT

PAPER NUMBER

2834

DATE MAILED: 07/25/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/993,009

Applicant(s)

KOLOMEITSEV ET AL.

Examiner

Heba Elkassabgi

Art Unit

2834

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 November 2001.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☒ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other: _____

DETAILED ACTION

Drawings

1. New formal drawings are required in this application because the drawings are objected to by the draftsman. Applicant is advised to employ the services of a competent patent draftsman outside the Office, as the Patent and Trademark Office no longer prepares new drawings.
2. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4) because reference character "34" has been used to designate both a line and the two poles.
3. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4) because reference characters "32" and "18" have both been used to designate the ring magnet.
4. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, claimed subject matter of claim #12, in which the depression portion forming an apex of a triangle must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.
5. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, claimed subject matter

of claim #8, in which the rotor yoke comprises a stack of laminations, must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

A proposed drawing corrections or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 1,2,3, 4, 5, 6,7,9,10,11,12,13, 14,15, 16,17,18,19,and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Suzuki et al. (U.S. Patent 6081058) and in view of Takahashi (U.S. Patent 5682072).

8. Suzuki et al. Illustrates in Figure 5 a permanent magnet motor having a rotor yoke (8) and a permanent magnet ring (9) that is adhered to the rotor yoke (8), which is skewed, with the permanent magnet ring (8) having a plurality of circumferentially spaced poles (2a to 2p). The permanent magnet ring and the rotor yoke are annular

Art Unit: 2834

members. With the permanent magnet ring including depressed portions around the midpoint between the poles (AA). In which the poles are of uniform shape and are tapered along each depressed portions and the depressed portions can be formed to be one of trapezoidal (Figure 8 E) and ovoid (Figures 8 B, C, or D). The permanent magnet ring is comprised of rare earth material. However, Suzuki et al. does not disclose a permanent magnet motor in which the rotor yoke consist of depressed portions along an outer peripheral edge.

9. Takahashi discloses in Figure 7 a rotor yoke (107) having depressed portions (116) along the outer peripheral edge of the yoke, in order to minimize the variation of torque.

10. It would have been obvious to one of ordinary skill in the art to modify Suzuki et al, with Takahashi in order to minimize the variation of toque within the permanent magnet motor.

11. In regards to the material choice of the permanent magnet ring in Claim 13, the selection of a known material based upon its suitability for the intended use is a design consideration within the skill of the art. In re Leshin, 227 F.2nd 197,125 USPQ 416 (CCPA 1960).

Art Unit: 2834

12. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Suzuki et al. (U.S. Patent 6081058) and in view of Takahashi (U.S. Patent 5682072) and Lungu (U.S. Patent 6262510).

13. Suzuki et al. Illustrates in Figure 5 a permanent magnet motor having a rotor yoke (8) and a permanent magnet ring (9) that is adhered to the rotor yoke (8), which is skewed, with the permanent magnet ring (8) having a plurality of circumferentially spaced poles (2a to 2p). The permanent magnet ring and the rotor yoke are annular members. With the permanent magnet ring including depressed portions around the midpoint between the poles (AA). In which the poles are of uniform shape and are tapered along each depressed portions and the depressed portions can be formed to be one of trapezoidal (Figure 8 E) and ovoid (Figures 8 B, C, or D). The permanent magnet ring is comprised of rare earth material. However, Suzuki et al. does not disclose a permanent magnet motor in which the rotor yoke consist of depressed portions along an outer peripheral edge.

14. Takahashi discloses in Figure 7 a rotor yoke (107) having depressed portions (116) along the outer peripheral edge of the yoke, in order to minimize the variation of torque.

15. Lungu illustrates in Figure 1 a rotor yoke composed of a stack of laminations (11), in order to achieve a high rotational speed.

Art Unit: 2834

16. It would have been obvious to one of ordinary skill in the art to modify Suzuki et al, with Takahashi in order to minimize the variation of toque within the permanent magnet motor and Lungu in order to achieve a high rotational speed.


Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Heba Elkassabgi whose telephone number is (703) 305-2723. The examiner can normally be reached on M-Th (6:30-3:30), and every other Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nestor Ramirez can be reached on (703) 308-1371. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 305-3431 for regular communications and (703) 305-3432 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-1782.

Heba Yousri Elkassabgi
July 20, 2002


NESTOR RAMIREZ
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2800